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Columbus, Ohio

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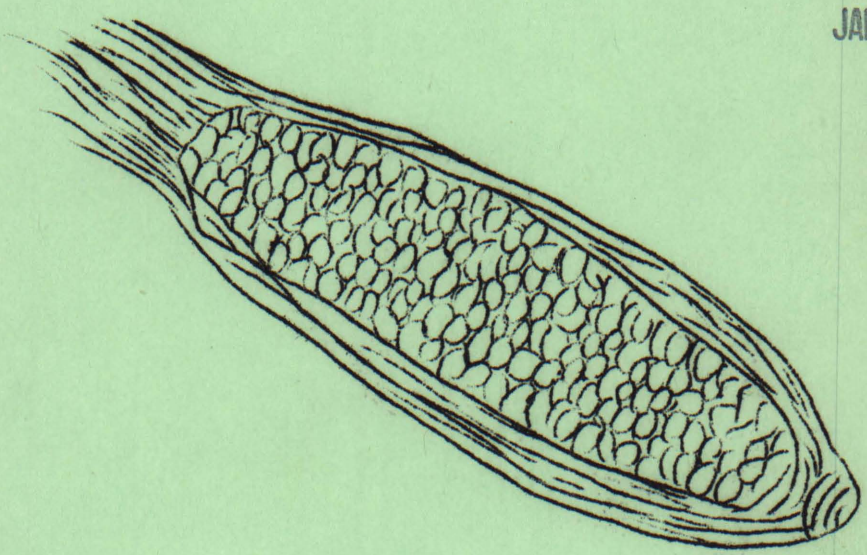

DEPARTMENT OF HORTICULTURE

OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER

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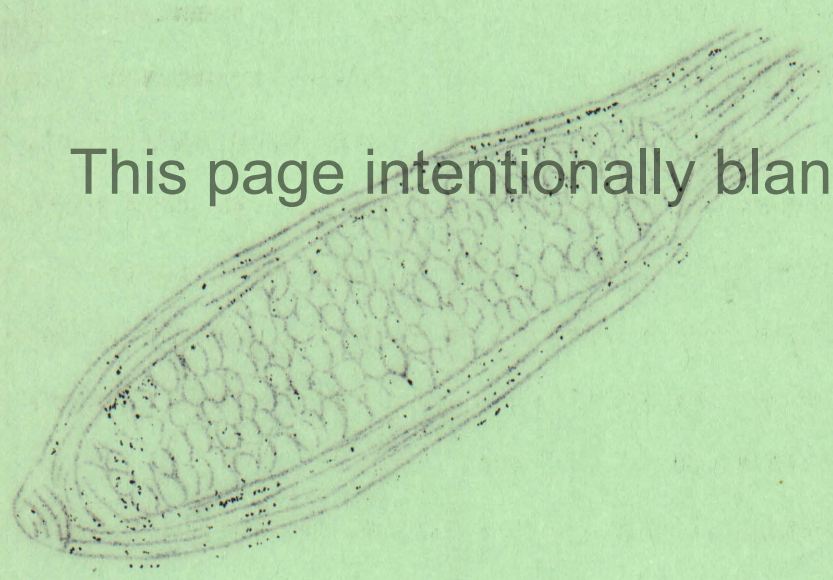

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1975 Evaluation of Sweet Corn Cultivars

Columbus, Ohio

William M. Brooks,[1] James D. Utzinger,[1] William L. George, Jr.,[1] E. K. Alban,[1]
Gerald G. Myers[1] and Alvin R. Mosley[2]

The 1975 sweet corn cultivar trials at the Ohio State University Horticultural Farm, 1000 West Lane Avenue, Columbus, consisted of twenty-eight cultivars which were replicated four times and fifty-eight cultivars in non-replicated, single plots. Cultivar Sugar Daddy in the replicated plots and Robson RXP 208, Ferry-Morse FM 209/74 and Northrup King EXP 668 in the non-replicated plots were damaged at harvest time resulting in the loss of the data from these plots.

Corn was seeded on May 14, 1975 in 36" rows with hills spaced 18" apart. Single row plots of 21 hills were 31.5' long. Blocks and tiers of plots were separated by a distance of six feet. Guard rows were planted to the east and west sides of rows running north and south with guard hills across the north and south ends of the entire planting. In addition to the other guard rows, 4 rows of an early maturing and a late maturing cultivar were planted on both the east and west sides of the entire planting of plots to enhance pollination. All plots were planted by hand jabber with 4 kernels per hill. Plants were thinned to 2 plants per hill at the 2 to 3 leaf stage.

Prior to plowing, 12-12-12 fertilizer was applied broadcast at the rate of 1000 pounds per acre. No additional fertilizer was applied during the season. Ramrod herbicide was applied, immediately after planting, at 5 pounds active ingredient per acre and watered in with sprinkler irrigation. No insecticides or fungicides were applied after planting. Most lots of seed had been treated with a fungicide and/or an insecticide. Irrigation was used throughout the season as needed.

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The following information on temperature and rainfall was obtained from the official records of the United States Weather Bureau at the Port Columbus International Airport.

Weather Data

Month	Average Temperature (°F.)	Total Rainfall (inches)
April	46.7	2.71
May	66.6	3.17
June	72.4	3.53
July	75.1	2.04
August	77.3	4.51

Listed below are the seed companies which generously supplied the seed for these trials without charge:

Code	Company
A-1	Agway, Inc., Buffalo, N.Y. 14240
A-2	Asgrow Seed Co., Kalamazoo, Michigan 49001
F-2	Ferry-Morse Seed Co., Mountain View, CA 94042
H-1	Joseph Harris Co., Rochester, N.Y. 14624
L-1	Letherman Seed Co., Canton, Ohio 44702
N-1	Northrup-King & Co., Minneapolis, MN 55413
N-2	F.M.C. Corp., A.D.C., Modesta, CA 95618
R-1	Robson Seed Farms Corp., Hall, N.Y. 14463
R-2	Rogers Brothers Co., Idaho Falls, Idaho 83401
T-1	Otis S. Twilley Seed Co., Salisbury, MD 21801

The first harvest was made on July 21 and the last harvest was made on August 13. Sprite, Sundance, Spring Gold, Earliking and Royal Crest were all harvested on the first day of harvest. The highest yielding cultivars in the replicated plots (Table 1) based on dozens of marketable ears harvested per acre were Apache, Gold Cup and Capitan with over 2000 dozen ears per acre.

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The marketable ears harvested from Apache were significantly greater than those harvested from Capitan but not significantly greater than ears harvested from the cultivar Gold Cup. The cultivars Merit, Commanche, Apache, Bellringer, Gold Cup, Northrup-King EXP 2583 and Winter Market had 90 percent or more of their yield marketable and Merit lead the group with 97 percent marketable. Style Pak and Northrup-King EXP 2583 had the heaviest husked ears in the replicated trials whereas Bonanaa had the longest husked ears. Merit, Niagara NCX 2004 and Sweet Sue had husked ears with the greatest diameter. Apache, Capitan and Gold Cup were the highest yielding cultivars based on tons of unhusked ears of marketable corn.

There were two cultivars or lines in the non-replicated plots (Table 2), that produced at the rate of over 2000 dozen marketable ears per acre. Some of these cultivars and lines may be included in future replicated plots.

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Table 1 - Replicated trial: Yield and other characteristics of sweet corn cultivars

Variety, Source and [a] Lot number	Days to First Harvest	Marketable yield/A			Average Wt. of ears un-husked (lbs)	Average length of ears husked (in.)	Average diameter of ears husked (in.)	Ear Worm %	Ear Smut %	Stewart's Wilt Rating [1]
		Dozens of ears	Wt. (tons)	Percent						
Sprite, H-1, 142-773F	68	1,748	5.36	81	.51	7.6	1.6	4	12	1
Sundance, H-1, 141-752T	68	1,738	5.38	80	.51	7.4	1.5	1	6	2
Spring Gold, H-1, 137-754T	68	1,681	4.93	75	.49	7.0	1.5	1	6	2
Earliking, N-1, 36815-1280I	68	1,325	3.95	75	.49	6.7	1.3	3	6	3
Royal Crest, N-1, 37009-11202	68	979	2.85	69	.49	7.0	1.6	3	21	4
Yukon, N-1, 37065-12602	70	1,469	5.08	82	.58	9.2	1.4	3	3	1
Harmony, H-1, 121-757F17	70	1,152	4.03	76	.58	7.3	1.5	-	10	1
Butter & Sugar, A-2, 4709-2	72	1,863	5.11	89	.46	7.7	1.5	2	2	1
Fanfare, R-2, 48005	72	1,316	4.63	59	.59	7.8	1.6	7	23	1
Seneca Star, R-1, 1244	73	1,604	5.38	89	.55	8.2	1.6	-	2	2
Comanche, A-2, 73018-F32	74	1,613	4.59	94	.48	8.0	1.5	1	1	2
Apache, L-1, 177E	76	2,362	7.81	92	.55	7.8	1.5	1	-	1
Gold Cup, H-1, 118-3-660F17	76	2,199	6.66	90	.50	7.2	1.4	2	-	1
Bellringer, H-1, 102-3669	76	1,508	5.57	91	.62	7.3	1.6	2	1	1
EXP. 2583, N-1, 37423-2583	76	1,489	6.49	90	.71	8.7	1.5	5	1	0
Merit, A-2, 73617-F40	77	1,498	5.52	97	.61	8.0	1.8	-	-	0
Bonanza, T-1, G-4	77	1,450	5.63	81	.63	9.4	1.7	2	1	1
Capitan, A-2, 33516-F40	79	2,007	7.11	86	.59	9.2	1.6	-	1	1
J. L. 49, H-1, 1101-777	79	1,527	5.16	75	.56	8.2	1.6	3	3	1
LSD		214	.93							

a - Cultivars ranked according to days to first harvest and dozens of marketable ears per acre.

1 - Ratings - 0 = No symptoms, 4 = Severe injury . These ratings made by Drs. David Coplin, Wayne Ellett and James Farley, Plant Pathologists.

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Table 1 (cont'd)

Variety, Source and Lot number [a]	Days to First Harvest	Marketable yield/A			Average Wt. of ears unhusked (lbs)	Average length of ears husked (in.)	Average diameter of ears husked (in.)	Ear Worm %	Ear Smut %	Stewart's Wilt Rating [1]
		Dozens of ears	Wt. (tons)	Percent						
Sweet Sue, H-1, 143-775 F16	79	1,508	4.79	78	.52	8.0	1.8	3	7	0-1
Winter Market, F-2, 90402-13104	79	1,479	5.08	90	.57	9.2	1.6	-	3	0-1
NCX 2004, N-2, 7928	79	1,412	5.66	85	.67	8.8	1.8	5	-	1
Bi-Queen, R-2, 48001	79	1,306	4.49	68	.57	7.6	1.3	-	6	1
Seneca Chief, R-1, 1323	84	1,604	5.73	81	.59	8.2	1.6	19	6	1
Silver Queen, R-2, 48747	84	1,296	5.43	66	.68	7.7	1.6	14	7	1
Style Pak, F-2, 90405-13231	85	903	3.84	79	.71	8.3	1.7	23	5	1
RXP 199, R-1, 9094	86	1,632	5.46	69	.54	8.2	1.7	24	12	1
LSD		214	.93							

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Table 2 - Non-replicated observation plots: Yield and other characteristics of sweet corn cultivars

Variety, Source and [a] Lot number	Days to First Harvest	Marketable yield/A dozens of ears	Marketable yield/A wt. (tons)	Percent	Average wt. of ears unhusked (lbs)	Average length of ears husked (in.)	Average diameter of ears husked (in.)	Ear worm %	Ear smut %	Stewart's Wilt Rating[1]
Gold Crest, F2, 90401	70	1,460	3.96	84	.45	7.6	1.5	-	5	2
Beacon, 72-1707, R2, 48063	70	1,383	5.25	88	.63	7.7	1.7	3	8	1-2
EXP 3244, N1, 37366-3244	70	1,383	5.28	94	.64	8.0	1.7	-	-	2-3
Aztec, A2, 73634-F40	70	1,344	4.29	92	.53	7.8	1.6	-	-	1
69-1689, R2, 18103	70	653	2.72	75	.69	8.6	1.8	-	24	1-2
Pageant, R2, 48059	71	1,498	7.58	75	.84	8.4	1.6	68	8	1
68-2657, R2, 28111	72	1,383	4.49	63	.54	-	-	3	11	1
FM745/74 BiColor, F2, 44432	73	538	1.11	46	.34	7.2	1.4	14	21	3
RXP 193, R1, 1575	74	1,652	5.41	99	.55	8.2	1.6	2	-	1-2
72-1651, R2, 38114	74	845	2.53	69	.52	8.4	1.7	-	9	2-3
XP-75-245, A1, none	75	1,344	4.01	24	.50	7.6	1.7	3	-	1
FM 743/74 BiColor, F2, 44729-3	75	615	1.50	42	.41	7.0	1.5	-	3	4
NK-199, N1, 37177-16002	76	1,652	6.70	91	.68	8.0	2.0	7	-	1
Buttercorn, A1, V870	76	1,344	3.96	82	.49	7.3	1.5	3	17	1
EXP 2580, N1, 36828-10101	76	1,268	5.32	83	.70	8.5	1.9	70	-	1
NCX 2008, N2, none	76	1,075	3.82	75	.59	-	-	7	-	1
Jubilee, R2, 48721	78	1,460	5.07	75	.58	7.8	1.8	8	3	2
68-1974, R2, 48053	78	1,421	6.17	72	.72	8.0	1.6	3	27	1
FM/ 568/74, F2, 44761-1	78	960	2.90	79	.50	8.0	1.6	-	-	0
Gold Crown, H1, 117-3672T18	79	1,997	7.56	92	.63	9.4	1.8	4	-	0
Gold Winner, H1, 119-3-674-F 20	79	1,882	6.45	84	.57	8.6	1.6	2	18	0-1
XP 362, A2, M72136-R32	79	1,767	6.20	91	.58	8.5	1.7	2	9	0
Apache, A2, 53532-F40	79	1,690	6.27	95	.62	7.2	1.6	-	-	1
Silver Treat, A1, none	79	1,690	6.11	86	.60	8.4	1.4	-	-	1
4209, F2, 90400	79	1,536	5.97	89	.65	8.5	1.6	38	5	1
XP1331, A2, M7227-F40	79	1,536	5.39	86	.59	8.0	1.4	10	8	1
Bonanza, F2, 90305	79	1,498	5.99	93	.67	9.1	1.7	-	-	0-1

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Table 2 (cont'd)

Variety, Source and Lot number [a]	Days to First Harvest	Marketable yield/A Dozens of ears	Wt. (tons)	Percent	Average Wt. of ears unhusked (lbs)	Average length of ears husked (in.)	Average diameter of ears husked (in.)	Ear Worm %	Ear Smut %	Stewart's Wilt Rating[1]
70-2070, R2, 38108	79	1,498	7.05	85	.78	8.5	1.7	-	8	1
E-4208, F2, 90400-13107	79	1,460	5.97	84	.68	8.4	1.6	47	8	1
Commander, A2, 73610-F40	79	1,383	5.76	56	.69	8.8	1.6	3	14	1
Preview, F2, 90101	79	1,344	5.21	82	.65	7.8	1.7	3	6	1
Target A, F2, 90305	79	1,344	5.71	87	.71	8.8	1.8	3	-	1
EXP 1791, N1, 36830-10101	79	1,329	4.45	87	.60	8.0	1.6	-	6	1
Monarch Advance, N1, 36895-10901	79	1,190	6.75	98	.95	8.8	1.8	43	-	1
NCX 2014, N2, none	79	999	3.82	52	.64	7.4	1.6	31	27	1-2
RXP 206, R1, 509/477A	79	576	1.59	59	.46	7.6	1.4	-	-	0
1104-67-57, H1, 1104-787	80	1,882	5.92	86	.52	7.4	1.5	-	2	0
RXP 223, R1, 4064-3	80	1,498	5.16	97	.57	7.8	1.6	3	-	1
XP 185 A, H1, 3708 Thick	80	1,329	4.70	86	.64	8.6	1.6	-	6	0
Bicolor Silver Queen, L1, 1647 E 138	80	1,152	3.89	56	.56	8.0	1.6	7	13	0-1
Tendersweet, A2, 73630-F40	80	922	3.39	55	.61	8.4	1.5	21	13	1
RXP 218, R1, 4074-4	81	1,152	3.80	89	.55	7.7	1.6	7	-	1
1107 Bicolor 67-SQ, H1, 1107-788 FLAT	82	1,536	6.00	77	.66	9.6	1.6	-	-	0
FM 350/74, F2, 44430, F	83	2,535	10.94	97	.72	8.6	1.8	23	-	0-1
Midway, A2, 53521-F40	84	2,228	9.35	89	.70	8.8	1.8	-	2	1
Seneca Scout, H1, 138-3-688T	84	1,460	5.97	75	.68	7.4	1.5	8	8	0
EXP 3272, N1, 37368-3272	84	1,460	6.54	95	.75	8.4	1.7	3	-	1
FM 35/74, F2, 44428F	84	1,268	4.82	89	.63	7.2	1.8	42	-	1
70-2367, R2, 48825	84	1,268	4.33	78	.57	8.0	1.7	9	6	1
FM 569/74, F2, 44761-3	84	1,152	3.85	96	.56	8.0	1.7	-	-	0-1
FM 536/74, F2, 44761-2	84	1,113	3.66	87	.55	8.0	1.7	45	-	0-1
Salute, A2, 73632-F40	84	883	3.94	74	.74	7.6	2.0	4	13	1
69-1656, R2, 38062	84	461	1.61	46	.58	8.2	1.8	8	17	1
Silver Queen (white) H1, 134-792-LF	86	922	3.39	66	.61	8.0	1.6	4	-	1

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